

AMENDMENTS TO THE SPECIFICATION:

Please add the following new paragraphs after the first full paragraph on page 7 of the specification:

--FIG. 1A is a perspective view of an implant having arcuate surfaces and an end cap in accordance with an embodiment of the present invention.

D1 FIG. 1B is a top elevational view of an implant having a leading end, a trailing end, and sides forming a circle in accordance with an embodiment of the present invention.

FIG. 1C is a graphical representation of a motion preserving device in accordance with an embodiment of the present invention. --

Please replace the twelfth full paragraph on page 7 of the specification with the paragraph below:

D2 FIG. 12A12 is an enlarged fragmentary top plan view of a third embodiment of the implant surface of the present invention from a view taken along area 12 of FIG. 1.

Please add the following new paragraph after the twelfth full paragraph on page 7 of the specification:

D3 --FIG. 12B is an enlarged fragmentary top plan view of another embodiment of the implant surface of the present invention from a view taken along area 12 of FIG. 1.--

Please replace the first full paragraph on page 8 of the specification with the paragraph below:

D4 FIG. 13 is a fragmentary side elevation view of the implant surface of FIG. 12A12 from a view taken along area 13 of FIG. 2.

Please replace the second full paragraph on page 8 of the specification with the paragraph below:

§3

FIG. 14 is a fragmentary end view of FIG. 12A12.

Please add the following new paragraphs after the second full paragraph on page 8 of the specification:

§6

--FIG. 14A is an enlarged fragmentary side view of a groove having a U-shape in accordance with an embodiment of the present invention from a view taken along area 14A of FIG. 14.

FIG. 14B is an enlarged fragmentary side view of a groove having a box-shape in accordance with an embodiment of the present invention from a view taken along area 14B of FIG. 14.

FIG. 14C is a fragmentary end view of a plurality of surface projections spaced apart from one another in accordance with an embodiment of the present invention.--

Please replace the third full paragraph on page 8 of the specification with the paragraph below:

§7

FIG. 15 is a fragmentary perspective view of the implant surface of FIG. 12A12.

Please replace the paragraph bridging pages 10 and 11 of the specification with the paragraph below:

§8

In this embodiment of surface configuration 120, a plurality of surface projections 122 are spaced apart laterally (side to side) by longitudinal grooves 130 formed along the longitudinal axis L of implant 100. In one embodiment, longitudinal grooves 130 have a V-shaped horizontal cross-section. The lower most portions of left and right side facets 132, 134 of consecutive side-by-side projections 122 can be coincident with each other or may be spaced apart, any space therebetween can be at least in part flat, curved, sloped or otherwise

configured. Each surface projection 122 has left and right side facets 132, 134 that converge to form a high point or peak 136 at the top of each surface projection 122. Each peak 136 can be aligned along lines that are perpendicular, parallel, and/or diagonally oriented to longitudinal axis L of implant 100. The left and right side facets 132, 134 resist side-to-side motion of implant 100 after it is inserted into the implantation space. Peaks 136 engage the bone of vertebral bodies V adjacent to implant 100 in the implantation site. It is appreciated that in a variation of the present invention, the peaks may be modified such as to be truncated or cut off to have a broader rather than sharper upper most surface. Moreover, the peaks can be cleaved in one or more directions so as to increase the surface area useful for engaging the bone of the vertebral bodies. The relieved areas of the cleaved projections are useful for containing and carrying fusion promoting substances other than bone such as bone morphogenetic proteins and genetic materials coding for the production of bone, or bone itself which could by way of example be in the form of a paste. It is further appreciated that for all the various embodiments of the surface configuration of the present invention, longitudinal grooves 130 can have horizontal cross-sections in a variety of configurations such as, without limitation, square-shaped or U-shaped configurations.

Please replace the paragraph bridging pages 19 and 20 of the specification with the paragraph below:

The spinal implants of the present invention can be for the purpose of achieving fusion. The upper and lower surfaces of the fusion implants can include at least one opening, each in communication with the other, to permit for the growth of bone from vertebral body to adjacent vertebral body through the implant. The implant can have an internal chamber and may also have an access opening for accessing the internal chamber, in which case the implant can further have a cover such as a cap 101' (shown in Fig. 1A) to close the access opening at least in part. Openings in the upper and lower surfaces of the

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implant can communicate with the internal chamber to permit further growth of bone from vertebral body to adjacent vertebral body through the implant. The internal chamber can contain bone growth promoting materials, including but not limited to, bone, bone morphogenetic proteins, hydroxyapatite, and genes coding for the production of bone. The implants of the present invention can be formed of a material that intrinsically participates in the growth of bone from one of the adjacent vertebral bodies to the other of the adjacent vertebral bodies.
